

Material Safety Data Sheet and Label Preparation

WAC 296-839-100

Scope

This chapter sets minimum requirements for content and distribution of material safety data sheets (MSDSs) and labels for hazardous chemicals

- This chapter applies when you do one or more of the following:
 - Import, produce, or repackage chemicals, including manufactured items (such as bricks, welding rods, and sheet metal) that aren't exempt as articles
 - Sell or distribute hazardous chemicals to manufacturers, distributors or employers
 - Choose to develop material safety data sheets (MSDSs) for a product you don't import or manufacture.



Reference:

See WAC 296-800-170, the Employer Chemical Hazard Communication rule, for MSDSs, label, and other requirements that apply when hazardous chemicals are used in your workplace.



Note:

- Use Table 2 to determine which sections in this chapter apply to your workplace.



Exemptions:

- All of the following are always exempt from this chapter:
 - Ionizing and nonionizing radiation
 - Biological hazards
 - Tobacco and tobacco products
- The chemicals and items listed in Table 1 are exempt from this chapter **under the conditions specified.**

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Material Safety Data Sheet and Label Preparation

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Scope

WAC 296-839-100 (Continued)

Table 1
Conditional Exemptions from this Chapter

<i>This chapter does NOT apply to</i>	<i>When</i>
<ul style="list-style-type: none"> Alcoholic beverages <i>or</i> Foods 	<ul style="list-style-type: none"> Sold, used, or prepared in a retail establishment (such as a grocery store, restaurant, bar, or tavern)
<ul style="list-style-type: none"> An article (manufactured item) 	<ul style="list-style-type: none"> It's not a fluid or particle <i>and</i> It's formed to a specific shape or design during manufacture for a particular end use function <i>and</i> It releases only trace amounts of a hazardous chemical during normal use AND doesn't pose a physical or health risk to employees <p>Note: End use is dependent in whole, or in part, upon maintaining the item's original shape or design. If the item will be significantly altered from its original form, it can no longer be considered a manufactured item</p>
<ul style="list-style-type: none"> Consumer products <ul style="list-style-type: none"> - Produced or distributed for sale meeting the definition of "consumer products" in the Consumer Product Safety Act. See U.S. Code, Title 15, Chapter 47, section 2052. <i>or</i> Hazardous household products <ul style="list-style-type: none"> - Meeting the definition of "hazardous substances" in the Federal Hazardous Substance Act. See U.S. Code, Title 15, Chapter 30, section 1261 at http://www.access.gpo.gov/uscode/uscmmain.html 	<ul style="list-style-type: none"> Both criteria apply: <ul style="list-style-type: none"> - They're used in the workplace for the same purpose as intended by the manufacturer or importer - The duration and frequency of an employee's exposure is no more than the range of exposures that consumers might reasonably experience
<ul style="list-style-type: none"> Cosmetics 	<ul style="list-style-type: none"> Packaged and sold in retail establishments
<ul style="list-style-type: none"> Drugs <ul style="list-style-type: none"> - Meeting the definition for "drugs" in the Federal Food, Drug, and Cosmetic Act. See U.S. Code, Title 21, Chapter 9, Subchapter II, section 321 at http://www.access.gpo.gov/uscode/uscmmain.html 	<ul style="list-style-type: none"> In solid, final form (for example, tablets or pills) for direct administration to the patient <i>or</i> Packaged and sold in retail establishments (for example, over-the-counter drugs) <i>or</i> Intended for employee consumption while in the workplace (for example, first-aid supplies)

Table 1 (Continued)

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WAC 296-839-100 (Continued)

<p><i>Table 1 (Continued)</i> <i>Conditional Exemptions from this Chapter</i></p>	
<i>This chapter does NOT apply to</i>	<i>When</i>
<ul style="list-style-type: none"> Hazardous solid wastes <ul style="list-style-type: none"> - Meeting the definition of "hazardous wastes" in the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976. See U.S. Code, Title 42, Chapter 82, Subchapter 1, section 6903 at http://www.access.gpo.gov/uscode/uscmmain.html 	<ul style="list-style-type: none"> Subject to the United States Environmental Protection Agency (EPA) regulations. EPA regulations are included in the Code of Federal Regulations (CFR). See http://www.epa.gov
<ul style="list-style-type: none"> Hazardous substances <ul style="list-style-type: none"> - Released into the environment, meeting the definition of "hazardous substances" in the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). See U.S. Code, Title 42, Chapter 103, Subchapter I, section 9601 at http://www.access.gpo.gov/uscode/uscmmain.html 	<ul style="list-style-type: none"> They're the focus of remedial or removal action being conducted under CERCLA in accordance with EPA regulations. See Title 40 of the Code of Federal Regulations (CFR) at http://www.epa.gov
<ul style="list-style-type: none"> Hazardous wastes <ul style="list-style-type: none"> - Meeting the definition of "dangerous wastes" in the Hazardous Waste Management Act. See chapter 70.105 RCW at http://www.leg.wa.gov/wsladm/default.htm 	<ul style="list-style-type: none"> Subject to Department of Ecology regulations, Chapter 173-303 WAC (see http://www.ecy.wa.gov), that addresses the accumulation, handling and management of hazardous waste, and describe all of the following: <ul style="list-style-type: none"> - Safety - Labeling - Personnel training - And other related requirements
<ul style="list-style-type: none"> Solid wood <i>or</i> Wood products (for example, lumber and paper) 	<ul style="list-style-type: none"> All of the following apply: <ul style="list-style-type: none"> - The material isn't treated with hazardous chemicals - The only hazard is potential flammability or combustibility - The product isn't expected to be processed (for example, by sanding or sawing)

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Scope

WAC 296-839-100 (Continued)

Use Table 2 to find out which sections of this chapter apply to you. For example, if you import **AND** sell hazardous chemicals, ALL sections apply. WAC 296-839-500 applies to all employers covered by the scope of this chapter.

TABLE 2 Section Application				
<i>If you</i>	<i>Then the sections marked with an "X" apply</i>			
	<i>20005 - 20010</i>	<i>30005</i>	<i>30010 - 30015</i>	<i>40005</i>
• Import or produce chemicals	X	X		
• Sell or distribute hazardous chemicals to - Manufacturers <i>or</i> - Distributors <i>or</i> - Employers (includes retail or wholesale transactions)			X	X
• Choose to develop MSDSs for a product you don't import or manufacture	X	X		

Hazard Evaluation

WAC 296-839-200

Summary

YOUR RESPONSIBILITY:

To make sure the hazardous chemicals are identified

You must

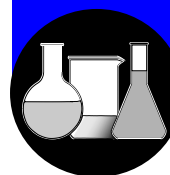
Conduct complete hazard evaluations

WAC 296-839-20005200-2

Provide access to hazard evaluation procedures

WAC 296-839-20010200-9

Hazard
Evaluation



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Hazard Evaluation

WAC 296-839-200

Rule

WAC 296-839-20005

Conduct complete hazard evaluations

IMPORTANT:

- Hazard evaluation is a process where hazards of chemicals are identified by reviewing available research or testing information. You aren't required to perform your own laboratory research or testing to meet the requirements of this section.
 - Information from hazard evaluations is used to complete material safety data sheets (MSDSs) and labels
 - MSDSs from your suppliers may be used to complete the hazard evaluation for chemicals you produce
 - MSDSs and labels are **NOT** required for chemicals that are determined to be nonhazardous
- Importers and manufacturers are required to develop MSDSs. If you choose to develop MSDSs for a product you don't import or manufacture, then this chapter also applies to you.

You must

- (1) Describe in writing your procedures for conducting hazard evaluations.
- (2) Conduct a complete hazard evaluation for ALL chemicals you produce or import to determine if they're hazardous chemicals.
 - Identify and consider available scientific evidence of health and physical hazards
 - Evidence that meets the criteria in Table 3 must be used to establish a hazard
 - Chemicals identified in a Table 4 source must be regarded as hazardous
 - The scope of health hazards considered must include the categories in Tables 5 and 6
 - If the chemical is a mixture, follow the additional criteria in Table 7.

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Hazard Evaluation

WAC 296-839-200

Rule

WAC 296-839-20005 (Continued)

If you find evidence that meets the criteria in Table 3, use it in your hazard evaluation.

Table 3 Criteria for Hazard Evidence	
Hazard	Criteria
<ul style="list-style-type: none">• Health hazard	<ul style="list-style-type: none">• Where available, use human case reports of health effects and• One or more studies that<ul style="list-style-type: none">- Are based on human populations, if available, and animal populations AND- Report statistically significant conclusions of a hazardous effect or health hazard (as defined in this rule) AND- Have been conducted following established scientific principles <p>Note:</p> <ul style="list-style-type: none">➤ If human data isn't available, use results of tests done on animals and other available studies to predict health effects on employees (for example, effects resulting from short and long-term exposures to chemicals).➤ In vitro studies alone don't generally form the basis of a finding of hazard.
<ul style="list-style-type: none">• Physical hazard	<ul style="list-style-type: none">• Valid evidence that shows a chemical is any one of the following as defined in WAC 296-839-500:<ul style="list-style-type: none">- A combustible liquid- A compressed gas- Explosive- Flammable- An organic peroxide- An oxidizer- Pyrophoric- Unstable (reactive)- Water-reactive

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Hazard Evaluation

WAC 296-839-200

Rule

WAC 296-839-20005 (Continued)



Helpful Tool:

Information Resources for Preparing Material Safety Data Sheets and Labels

In addition to Table 4, you may find this form useful when conducting hazard evaluations. You can find a copy of this form in the Resources Section of this book.

You must

Chemicals identified in the sources listed in Table 4 must be assumed to be hazardous (including carcinogens and potential carcinogens).

Table 4
Information Sources Identifying Hazardous Chemicals

- Sources that address a broad range of hazard categories:
 - Chapter 296-62 WAC, General Occupational Health Standards, WISHA
 - 29 CFR Part 1910, Subpart Z, Toxic and Hazardous Substances, Occupational Safety and Health Administration (OSHA)
 - ***Threshold Limit Values for Chemical Substances and Physical Agents in the Work Environment***, American Conference of Governmental Industrial Hygienists (ACGIH) (latest edition).
- Sources that identify carcinogens or potential carcinogens:
 - Chapter 296-62 WAC, General Occupational Health Standards, WISHA
 - 29 CFR Part 1910, Subpart Z, Toxic and Hazardous Substances, Occupational Safety and Health Administration (OSHA)
 - National Toxicology Program (NTP), Annual Report on Carcinogens (latest edition)
 - International Agency for Research on Cancer (IARC) Monographs (latest editions).



Note:

The Registry of Toxic Effects of Chemical Substances is published by the National Institute for Occupational Safety and Health (NIOSH) and identifies chemicals found to be potential carcinogens by the NTP and IARC.

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Hazard Evaluation

WAC 296-839-200

Rule

WAC 296-839-20005 (Continued)

Chemicals meeting Table 5 definitions, along with the criteria for established evidence in Table 3, must be regarded as hazardous.

Table 5 is NOT intended to present all hazard categories or test methods. Available scientific data involving other test methods and animal species must also be evaluated to determine a chemical's hazards.

<i>Table 5</i> <i>Standard Health Hazard Categories</i>	
<i>A chemical is considered to be</i>	<i>IF</i>
<ul style="list-style-type: none">• A carcinogen	<ul style="list-style-type: none">• The International Agency for Research on Cancer (IARC) considers it to be a carcinogen or potential carcinogen<i>or</i>• The National Toxicity Program (NTP) (latest edition) lists it as a carcinogen or potential carcinogen<i>or</i>• It's regulated by WISHA or OSHA as a carcinogen
<ul style="list-style-type: none">• Corrosive	<ul style="list-style-type: none">• It causes visible destruction of, or irreversible alterations in, living tissue (not inanimate surfaces) by chemical action at the site of contact <p>Example:</p> <ul style="list-style-type: none">- A chemical is corrosive if tested on the intact skin of albino rabbits by a method described by the U.S. Department of Transportation (in Appendix A to 49 CFR Part 173) and, it destroys or changes (irreversibly) the structure of the tissue at the contact site after a 4-hour exposure period.
Table 5 (Continued)	

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Hazard Evaluation

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Rule

WAC 296-839-20005 (Continued)

<i>Table 5 (Continued)</i> <i>Standard Health Hazard Categories</i>	
<i>A chemical is considered to be</i>	<i>IF</i>
<ul style="list-style-type: none">• Toxic	<ul style="list-style-type: none">• It has a median lethal dose (LD50) greater than 50 milligrams per kilogram, but no more than 500 milligrams per kilogram of body weight, when administered orally to albino rats weighing between 200 - 300 grams each. <p>or</p> <ul style="list-style-type: none">• It has a median lethal dose (LD50) greater than 200 milligrams per kilogram, but not more than 1,000 milligrams per kilogram, of body weight when administered by continuous contact for 24-hours (or less if death occurs within 24-hours) with the bare skin of albino rabbits weighing between 2 - 3 kilograms each <p>or</p> <ul style="list-style-type: none">• It has a median lethal concentration (LC50), in air:<ul style="list-style-type: none">- Greater than 200 parts per million, but not more than 2,000 parts per million (by volume of gas or vapor) <p>OR</p> <ul style="list-style-type: none">- Greater than 2 milligrams per liter, but not more than 20 milligrams per liter, of mist, fume, or dust, when administered by continuous inhalation for one hour (or less if death occurs within one hour) to albino rats, weighing between 200 - 300 grams each
<ul style="list-style-type: none">• Highly toxic	<ul style="list-style-type: none">• It has a median lethal dose (LD50) of 50 milligrams, or less, per kilogram of body weight when administered orally to albino rats weighing between 200 - 300 grams each <p>or</p> <ul style="list-style-type: none">• It has a median lethal dose (LD50) of 200 milligrams, or less, per kilogram of body weight when administered by continuous contact for 24-hours (or less if death occurs within 24-hours) with the bare skin of albino rabbits weighing between 2 - 3 kilograms each <p>or</p> <ul style="list-style-type: none">• It has a median lethal concentration of (LC50), in air, of:<ul style="list-style-type: none">- 200 parts per million (by volume), or less, of gas or vapor <p>OR</p> <ul style="list-style-type: none">- 2 milligrams per liter, or less, of mist, fume, or dust, when administered by continuous inhalation for one hour (or less if death occurs within one hour) to albino rats weighing between 200-300 grams each

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Hazard Evaluation

WAC 296-839-200

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WAC 296-839-20005 (Continued)

<i>Table 5 (Continued)</i> <i>Standard Health Hazard Categories</i>	
<i>A chemical is considered to be</i>	<i>IF</i>
<ul style="list-style-type: none">• An irritant	<ul style="list-style-type: none">• It is not corrosive, but causes a reversible inflammatory effect on living tissue by chemical action at the contact site Examples: <ul style="list-style-type: none">- The chemical is a skin irritant when tested on the intact skin of albino rabbits (by the methods of 16 CFR 1500.41) for 4 hours exposure, (or by other appropriate techniques) and the exposure results in an empirical score of 5 or more- A chemical is an eye irritant if so determined under the procedure listed in 16 CFR 1500.42 or other appropriate techniques
<ul style="list-style-type: none">• A sensitizer	<ul style="list-style-type: none">• It causes a substantial proportion of exposed people or animals to develop an allergic reaction in normal tissue after repeated exposure

Hazard
Evaluation



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Hazard Evaluation

WAC 296-839-200

Rule

WAC 296-839-20005 (Continued)

Categories provided in Table 6 illustrate the broad range of target organ effects that must be considered when conducting hazard evaluations. Chemicals meeting Table 6 definitions, along with the criteria for established evidence in Table 3, must be regarded as hazardous.

Examples provided in Table 6 are **NOT** intended to be a complete list.

<p><i>Table 6</i> <i>Examples of Target Organ Effect Categories</i></p>			
<i>Category</i>	<i>Definition</i>	<i>Examples of Signs and Symptoms</i>	<i>Examples of Chemicals</i>
Hepatotoxins	Cause liver damage	<ul style="list-style-type: none"> • Jaundice • Liver enlargement 	<ul style="list-style-type: none"> • Carbon tetrachloride • Nitrosamines
Nephrotoxins	Cause kidney damage	<ul style="list-style-type: none"> • Edema • Proteinuria 	<ul style="list-style-type: none"> • Halogenated hydrocarbons • Cadmium
Neurotoxins	Cause primary toxic effects on the nervous system	<ul style="list-style-type: none"> • Narcosis • Behavioral changes • Decrease in motor functions 	<ul style="list-style-type: none"> • Mercury • Carbon disulfide • Lead
Chemicals that act on the <ul style="list-style-type: none"> • Blood <i>or</i> <ul style="list-style-type: none"> • Hematopoietic (blood forming) system 	<ul style="list-style-type: none"> • Decrease hemoglobin function <i>or</i> <ul style="list-style-type: none"> • Deprive the body tissues of oxygen 	<ul style="list-style-type: none"> • Cyanosis • Loss of consciousness 	<ul style="list-style-type: none"> • Carbon monoxide • Cyanides • Benzene
Chemicals that damage the lungs	<ul style="list-style-type: none"> • Irritate lungs <i>or</i> <ul style="list-style-type: none"> • Damage pulmonary tissue 	<ul style="list-style-type: none"> • Cough • Tightness in chest • Shortness of breath 	<ul style="list-style-type: none"> • Silica • Asbestos
Reproductive toxins	Affect reproductive capabilities, including: <ul style="list-style-type: none"> • Chromosomal damage (mutation) • Effects on fetuses (teratogenesis) 	<ul style="list-style-type: none"> • Birth defects • Sterility 	<ul style="list-style-type: none"> • Lead • 1,2-Dibromo-3-chloropropane (DBCP) • Nitrous Oxide
Cutaneous (skin) hazards	Affect the dermal layer of the body	<ul style="list-style-type: none"> • Defatting of the skin • Rashes • Irritation 	<ul style="list-style-type: none"> • Ketones • Chlorinated compounds
Eye hazards	Affect the eye or ability to see	<ul style="list-style-type: none"> • Conjunctivitis • Corneal damage 	<ul style="list-style-type: none"> • Organic solvents • Acids

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Hazard Evaluation

WAC 296-839-200

Rule

WAC 296-839-20005 (Continued)

<i>Table 7</i> <i>Criteria for Evaluating Chemical Mixtures</i>	
<i>IF a mixture</i>	<i>THEN</i>
<ul style="list-style-type: none">Has been thoroughly tested as a whole for a physical or health hazard	<ul style="list-style-type: none">You must use those results
<ul style="list-style-type: none">Has not been tested as a whole for a health hazard	<ul style="list-style-type: none">You must:<ul style="list-style-type: none">Evaluate EACH ingredient in the mixture to determine the hazardsConsider the mixture to have the same hazard as each ingredient determined to be hazardous
<ul style="list-style-type: none">Has not been tested as a whole for physical hazards	<ul style="list-style-type: none">You must:<ul style="list-style-type: none">Use any scientifically valid data available to evaluate the potential physical hazards of the mixture

WAC 296-839-20010

Provide access to hazard evaluation procedures

You must

- Provide access to your written hazard evaluation procedures when requested by any of the following:
 - Employees
 - Designated representatives of employees
 - Representatives of the Department of Labor and Industries
 - Representatives of the National Institute for Occupational Safety and Health (NIOSH).

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Hazard
Evaluation



Notes

Material Safety Data Sheets

WAC 296-839-300

Summary

YOUR RESPONSIBILITY:

To provide complete and accurate material safety data sheets (MSDSs)

You must

Develop or obtain MSDSs

WAC 296-839-30005 300-2

Provide MSDSs

WAC 296-839-30010 300-6

Follow-up if an MSDS isn't provided

WAC 296-839-30015 300-8

MSDS



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Material Safety Data Sheets

WAC 296-839-300

Rule

WAC 296-839-30005

Develop or obtain material safety data sheets (MSDSs)

You must

- Develop or obtain a complete and accurate Material Safety Data Sheet (MSDS) for each hazardous chemical or mixture according to ALL of the following:
 - ALL information in Table 8 must be completed. If there is no relevant information for a required item, this must be noted. Blank spaces aren't permitted.



Note:

- No specific format is required for MSDSs; however, an example format (OSHA form 174) can be found online at: <http://www.osha.gov>
- One MSDS can be developed for a group of complex mixtures (for example, jet fuels or crude oil) IF the health and physical hazards of the mixtures are similar (the amounts of chemicals in the mixture may vary).

You must

- Make sure the content of MSDSs accurately represents the available scientific evidence.



Note:

You may report results of scientifically valid studies that tend to refute findings of hazards.

You must

- Make sure MSDSs are in English.



Note:

You may develop copies of MSDSs in other languages.

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Material Safety Data Sheets

WAC 296-839-300

Rule

WAC 296-839-30005 (Continued)

You must

- Revise an MSDS when you become aware of new and significant information regarding the hazards of a chemical, or how to protect against the hazards
 - Within 3 months after you first become aware of the information
- OR**
- Before the chemical is reintroduced into the workplace if the chemical is no longer being used, produced or imported.

Table 8 Information Required on MSDSs
<ul style="list-style-type: none">• The chemical's identity as it appears on the label
<ul style="list-style-type: none">• The date the MSDS was prepared or updated
<ul style="list-style-type: none">• A contact for additional information about the hazardous chemical and appropriate emergency procedures. Include all of the following:<ul style="list-style-type: none">- Name- Address- Telephone number of the responsible party preparing or distributing the MSDS
<ul style="list-style-type: none">• The chemical's hazardous ingredients as determined by your hazard evaluation<p>Note: The identities of some chemicals may be protected as trade secret information (see Chapter 296-62 WAC, Part B-1, Trade Secrets).</p><ul style="list-style-type: none">- For a single substance chemical, include the chemical and common name(s) of the substance- For mixtures tested as a whole<ul style="list-style-type: none">• Include the common name(s) of the mixtureand• List the chemical and common name(s) of ingredients that contribute to the known hazards- For mixtures NOT tested as a whole, list the chemical and common name(s) of hazardous ingredients<ul style="list-style-type: none">• That make up 1% or more of the mixture, by weight or volume, including carcinogens (if 0.1% concentration or more, by weight or volume)- If ingredients are less than the above concentrations but may present a health risk to employees (for example, allergic reaction or exposure could exceed the permissible exposure limits, or PEL) they must be listed here
Table 8 (Continued)

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Material Safety Data Sheets

WAC 296-839-300

Rule

WAC 296-839-30005 (Continued)

<i>Table 8 (Continued)</i> <i>Information Required on MSDSs</i>
<ul style="list-style-type: none">Exposure limits for airborne concentrations. Include ALL of the following, when they exist:<ul style="list-style-type: none">WISHA or OSHA PELs<ul style="list-style-type: none">The 8-hour time weighted average (TWA)The short-term exposure limit (STEL), if availableCeiling values, if available<p>Note: WISHA PEL categories are defined, and values are provided, in Chapter 296-62 WAC, Part H.</p><ul style="list-style-type: none">Threshold limit values (TLVs) including 8-hour TWAs, STELS, and ceiling valuesOther exposure limits used or recommended by the employer preparing the MSDS
<ul style="list-style-type: none">Physical and chemical characteristics<ul style="list-style-type: none">For example, boiling point, vapor pressure, and odor
<ul style="list-style-type: none">Fire, explosion data, and related information<ul style="list-style-type: none">For example, flashpoint, flammable and explosion limits, extinguishing media, and unusual fire or explosion hazards
<ul style="list-style-type: none">Physical hazards of the chemical including reactivity information<ul style="list-style-type: none">For example, incompatibilities, decomposition products, by-products, and conditions to avoid
Table 8 (Continued)

MSDS



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Material Safety Data Sheets

WAC 296-839-300

Rule

WAC 296-839-30005 (Continued)

<i>Table 8 (Continued)</i> <i>Information Required on MSDSs</i>
<ul style="list-style-type: none">• Health hazard information including ALL of the following:<ul style="list-style-type: none">- Primary routes of exposure<ul style="list-style-type: none">• For example, inhalation, ingestion, and skin absorption or other contact<p>Note: A "skin notation" listed with either an ACGIH TLV or WISHA/OSHA PEL indicates that skin absorption is a primary route of exposure.</p><ul style="list-style-type: none">- Health effects (or hazards) associated with:<ul style="list-style-type: none">• Short-term exposureand<ul style="list-style-type: none">• Long-term exposure<p>Examples of:</p><ul style="list-style-type: none">• Short-term health effects (or hazards) include eye irritation, skin damage caused by contact with corrosives, narcosis, sensitization, and lethal dose.• Long-term health effects (or hazards) include cancer, liver degeneration, and silicosis.- Whether the chemical is listed or described as a carcinogen or potential carcinogen in the latest editions of each of the following:<ul style="list-style-type: none">• The National Toxicology Program (NTP) Annual Report on Carcinogensor<ul style="list-style-type: none">• The International Agency for Research on Cancer (IARC) Monographs as a potential carcinogenor<ul style="list-style-type: none">• WISHA or OSHA rules- Signs and symptoms of exposure to hazardous substances, including those that:<ul style="list-style-type: none">• Can be measured such as decreased pulmonary functionand<ul style="list-style-type: none">• Are subjective such as feeling short of breath.- Medical conditions generally recognized as being aggravated by exposure
Table 8 (Continued)

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MSDS



Material Safety Data Sheets

WAC 296-839-300

Rule

WAC 296-839-30005 (Continued)

<i>Table 8 (Continued)</i> <i>Information Required on MSDSs</i>
<ul style="list-style-type: none">• Emergency and first-aid procedures
<ul style="list-style-type: none">• Generally applicable precautions for safe handling and use known to the employer preparing the MSDS<ul style="list-style-type: none">- For example, appropriate procedures for clean-up of spills and leaks, waste disposal method, precautions during handling and storing
<ul style="list-style-type: none">• Generally applicable and appropriate control measures known to the employer preparing the MSDS, including ALL of the following:<ul style="list-style-type: none">- Engineering controls (for example, general or local exhaust ventilation)- Work practices- Personal protective equipment (PPE)- Personal hygiene practices- Protective measures during repair and maintenance of contaminated equipment

1 The identities of some chemicals may be protected as trade secret information (see chapter 296-62 WAC, Part B-1, Trade secrets).

2 WISHA PEL categories are defined, and values are provided, in chapter 296-841 WAC, Identifying and controlling respiratory hazards.

3 A "skin notation" listed either an ACGIH TLV or WISHA/OSHA PEL indicates that skin absorption is a primary route of exposure.

4 Examples of:

- Short-term health effects (or hazards) include eye irritation, skin damage caused by contact with corrosives, narcosis, sensitization, and lethal dose.
- Long-term health effects (or hazards) include cancer, liver degeneration, and silicosis.

5 Signs and symptoms of exposure to hazardous substances include those that:

- Can be measured such as decreased pulmonary function and
- Are subjective such as feeling short of breath.

WAC 296-839-30010

Provide MSDSs for products shipped, transferred or sold over-the-counter

You must

- Provide the correct MSDS to manufacturers, distributors and employers:
 - With the initial shipment or transfer of the product
- AND**
- With the first shipment or transfer after an MSDS is updated
- AND**
- Whenever one is requested.

-Continued-

1 • 800 • 4 B E S A F E (1 • 800 • 4 2 3 • 7 2 3 3)



Material Safety Data Sheets

WAC 296-839-300

Rule

WAC 296-839-30010 (Continued)



Note:

- MSDSs may be provided separately from containers as long as they are provided before or at the same time as the containers. For example, you may fax, or e-mail the MSDS.
- You are **NOT** required to provide MSDSs to retailers who inform you they:
 - Don't sell the product to commercial accounts**AND**
 - Don't open the sealed product containers for use in their workplace.

You must

- Follow the requirements in Table 9 for chemicals sold over the counter.

<i>Table 9</i> <i>Requirements for Chemicals Sold Over-the-Counter (NOT Shipped)</i>	
<i>IF you are a</i>	<i>THEN</i>
<ul style="list-style-type: none">• Retail distributor WITH commercial accounts	<ul style="list-style-type: none">• Provide an MSDS to employers with commercial accounts when requestedand• Post a sign, or otherwise inform employers, that MSDSs are available
<ul style="list-style-type: none">• Retail distributor WITHOUT commercial accounts	<ul style="list-style-type: none">• Provide the employer, when requested, with ALL of the following:<ul style="list-style-type: none">- Name- Address- Telephone number of the chemical manufacturer, importer, or distributor who can provide an MSDS
<ul style="list-style-type: none">• Wholesale distributor selling products over-the-counter to employers	<ul style="list-style-type: none">• Provide an MSDS to employers with commercial accounts when requestedand• Post a sign, or otherwise inform employers, that MSDSs are available



Material Safety Data Sheets

WAC 296-839-300

Rule

WAC 296-839-30015

Follow-up if an MSDS isn't provided

You must

- Obtain an MSDS from the chemical manufacturer, distributor or importer as soon as possible, if an MSDS isn't provided for a shipment labeled as a hazardous chemical.

MSDS



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300-8

05/03

Labeling

WAC 296-839-400

Summary

Labeling

YOUR RESPONSIBILITY:

To provide employers with containers of hazardous chemicals that are properly labeled

You must

Label containers of hazardous chemicals

WAC 296-839-40005400-2



-Continued-

<http://www.lni.wa.gov/>



Labeling

WAC 296-839-400

Rule

WAC 296-839-40005

Label containers of hazardous chemicals



Exemption:

Containers are exempt from this section if ALL hazardous contents are listed in Table 11.

You must

- Make sure every container of hazardous chemicals leaving the workplace is properly labeled. This includes ALL of the following:
 - The identity of the hazardous chemical (the chemical or common name) that matches the identity used on the MSDS
 - An appropriate hazard warning
 - The name and address of the chemical manufacturer, importer, or other responsible party
 - Make sure labeling doesn't conflict with the requirements of:
 - The Hazardous Materials Transportation Act (49 U.S.C. 1801 et seq.)
- AND**
- Regulations issued under the act by the U.S. Department of Transportation (Title 49 of the Code of Federal Regulations, Parts 171 through 180). See <http://www.dot.gov>
 - Revise labels within 3 months of becoming aware of new and significant information about chemical hazards
 - Provide revised labels on containers beginning with the first shipment after a revision, to manufacturers, distributors or employers

-Continued-

WAC 296-839-40005 (Continued)

You must

- Revise the label when a chemical isn't currently used, produced or imported, before:
 - You resume shipping (or transferring) the chemical
- OR**
- The chemical is reintroduced in the workplace
- Label information:
 - Clearly written in English
- AND**
- Prominently displayed on the container



Reference:

Additional labeling requirements for specific hazardous chemicals (for example, asbestos, cadmium, and formaldehyde) are found in chapter 296-62 WAC, General Occupational Health Standards (see parts F, G, I and I-1 of that chapter).



Note:

When the conditions specified in Table 10 are met for the solid material products listed, you aren't required to provide labels for every shipment.

-Continued-





Labeling

WAC 296-839-400

Rule

WAC 296-839-40005 (Continued)

You must

Table 10 Labeling for Solid Materials	
<i>You need only send labels with the first shipment, IF the product is</i>	AND
Whole grain	<ul style="list-style-type: none"> It's shipped to the same customer and No hazardous chemicals are part of or known to be present with the product which could expose employees during handling <ul style="list-style-type: none"> - For example, cutting fluids on solid metal, and pesticides with grain
Solid untreated wood	
Solid metal For example: Steel beams, metal castings	
Plastic items	

-Continued-

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WAC 296-839-40005 (Continued)



Exemptions:

The chemicals (and items) listed in Table 11 are EXEMPT from THIS SECTION under the conditions specified. Requirements in other sections still apply.



Table 11 Conditional Label Exemptions	
<i>This section doesn't apply to</i>	<i>When the product is</i>
<ul style="list-style-type: none"> Pesticides <ul style="list-style-type: none"> - Meeting the definition of "pesticides" in the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). See Title 7, U.S.C. Chapter 6, Subchapter II, section 136 at http://www.access.gpo.gov/uscode/uscmain.html. 	<ul style="list-style-type: none"> Subject to: <ul style="list-style-type: none"> - Labeling requirements of FIFRA. See http://www.access.gpo.gov/uscode/uscmain.html and - Labeling regulations issued under FIFRA by the United States Environmental Protection Agency EPA. See Title 40 of the Code of Federal Regulations at http://www.epa.gov.
<ul style="list-style-type: none"> A chemical substance or mixture <ul style="list-style-type: none"> - Meeting the definition of "chemical substance" or "mixture" in the Toxic Substance Control Act (TSCA). See Title 15 U.S.C. Chapter 53, Subchapter II, section 2602 at http://www.access.gpo.gov/uscode/uscmain.html 	<ul style="list-style-type: none"> Subject to: <ul style="list-style-type: none"> - Labeling requirements of TSCA. See http://www.access.gpo.gov/uscode/uscmain.html and - Labeling requirements issued under TSCA by the EPA. See Title 40 of the Code of Federal Regulations at http://www.epa.gov.
Table 11 (Continued)	

-Continued-



Labeling

WAC 296-839-400

Rule

WAC 296-839-40005 (Continued)

Table 11 (Continued)
Conditional Label Exemptions

<i>This section doesn't apply to</i>	<i>When the product is</i>
<ul style="list-style-type: none"> Each of the following: <ul style="list-style-type: none"> - Food - Food additives - Color additives - Drugs - Cosmetics - Medical devices or products - Veterinary devices or products - Materials intended for use in these products (for example: flavors and fragrances) As defined in <ul style="list-style-type: none"> - The Federal Food, Drug, and Cosmetic Act. See Title 21 U.S.C. Chapter 9, Subchapter II, section 321 at http://www.access.gpo.gov/uscode/uscmmain.html <i>or</i> - The Virus-Serum Toxin Act of 1913. See Title 21 U.S.C. Chapter 5, section 151 et seq. at http://www.access.gpo.gov/uscode/uscmmain.html <i>or</i> - Regulations issued under these acts. See Title 21 Part 101 in the Code of Federal Regulations, and Title 9, in the Code of Federal Regulations at http://www.access.gpo.gov/nara/cfr/index.html 	<ul style="list-style-type: none"> Subject to: <ul style="list-style-type: none"> - Labeling requirements in Federal Food, Drug, and Cosmetic Act, Virus-Serum Toxin Act of 1913, and issued regulations enforced by the United States Food and Drug Administration. See Title 21 Parts 101-180 in the Code of Federal Regulations at http://www.access.gpo.gov/nara/cfr/index.html <i>or</i> Department of Agriculture. See Title 9 in the Code of Federal Regulations at http://www.access.gpo.gov/nara/cfr/index.html
Table 11 (Continued)	

-Continued-

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Labeling

WAC 296-839-400

Rule

WAC 296-839-40005 (Continued)

<p><i>Table 11 (Continued)</i> <i>Conditional Label Exemptions</i></p>	
<p><i>This section doesn't apply to</i></p>	<p><i>When the product is</i></p>
<ul style="list-style-type: none"> Each of the following: <ul style="list-style-type: none"> Distilled spirits (beverage alcohols) <i>and</i> Wine <i>and</i> Malt beverage As defined in <ul style="list-style-type: none"> The Federal Alcohol Administration Act. See Title 27 U.S.C. section 201 at http://www.access.gpo.gov/uscode/uscmmain.html <i>and</i> Regulations issued under this act. See Title 27 in the Code of Federal Regulations at http://www.access.gpo.gov/nara/cfr/index.html 	<ul style="list-style-type: none"> Subject to: <ul style="list-style-type: none"> Labeling requirements of Federal Alcohol Administration Act. See http://www.access.gpo.gov/uscode/uscmmain.html <i>and</i> Labeling regulations issued under Federal Alcohol Administration Act by the Bureau of Alcohol, Tobacco, and Firearms. See Title 27 in the Code of Federal Regulations at http://www.access.gpo.gov/nara/cfr/index.html
<ul style="list-style-type: none"> Consumer products <i>and</i> Hazardous substances <ul style="list-style-type: none"> As defined in <ul style="list-style-type: none"> The Consumer Product Safety Act. See 15 U.S.C. 2051 et seq. at http://www.access.gpo.gov/uscode/uscmmain.html <i>and</i> The Federal Hazardous Substances Act. See 15 U.S.C. 1261 et seq. at http://www.access.gpo.gov/uscode/uscmmain.html 	<ul style="list-style-type: none"> Subject to: <ul style="list-style-type: none"> A consumer product safety or labeling requirement of the Consumer Product Safety Act or Federal Hazardous Substances Act. See http://www.access.gpo.gov/uscode/uscmmain.html <i>or</i> Regulations issued under these acts by the Consumer Product Safety Commission. See Title 16 in the Code of Federal Regulations at http://www.access.gpo.gov/nara/cfr/index.html
<ul style="list-style-type: none"> Agricultural seed <i>and</i> Vegetable seed treated with pesticides 	<ul style="list-style-type: none"> Labeled as required by <ul style="list-style-type: none"> The Federal Seed Act. See Title 7 U.S.C. Chapter 37 section 1551 et seq. at http://www.access.gpo.gov/uscode/uscmmain.html <i>and</i> Labeling requirements issued under Federal Seed Act by the United States Department of Agriculture. See http://www.access.gpo.gov/uscode/uscmmain.html

Labeling



<http://www.lni.wa.gov/>

Notes

Material Safety Data Sheet and Label Preparation

WAC 296-839-500

Definitions

The following definitions apply to this chapter:

Article (manufactured item)

- A manufactured item that:
 - Isn't a fluid or particle
- AND**
- Is formed to a specific shape or design during manufacture for a particular end use function
- AND**
- Releases only trace amounts of a hazardous chemical during normal use and doesn't pose a physical or health risk to employees.

Chemical

- An element or mixture of elements
- OR**
- A compound or mixture of compounds
- OR**
- A mixture of elements and compounds

Included are manufactured items (such as bricks, welding rods and sheet metal) that aren't exempt as an article.

Chemical name

- The scientific designation of a chemical developed by the
 - International Union of Pure and Applied Chemistry (IUPAC)
- OR**
- Chemical Abstracts Service (CAS) rules of nomenclature
- OR**
- A name that clearly identifies the chemical for the purpose of conducting a hazard evaluation.

-Continued-

<http://www.lni.wa.gov/>

Definitions



Material Safety Data Sheet and Label Preparation

WAC 296-839-500

Definitions

WAC 296-839-500 (Continued)

Combustible liquid

Liquids with a flashpoint of at least 100°F (37.8°C) and below 200°F (93.3°C). A mixture with at least 99% of its components having flashpoints of 200°F (93.3°C), or higher, isn't considered a combustible liquid.

Commercial account

An arrangement where a retailer is selling hazardous chemicals to an employer

- Generally in large quantities over time

OR

- At costs below regular retail price.

Common name

Any designation or identification used to identify a chemical other than the chemical name, such as a

- Code name or number

OR

- Trade or brand name

OR

- Generic name.

Compressed gas

- A contained gas or mixture of gases with an absolute pressure greater than:

- 40 psi at 70°F (21.1°C)

OR

- 104 psi at 130°F (54.4°C) regardless of the pressure at 70°F (21.1°C)

OR

- A liquid with a vapor pressure greater than 40 psi at 100°F (37.8°C), as determined by ASTM D323-72.

-Continued-

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Material Safety Data Sheet and Label Preparation

WAC 296-839-500

Definitions

WAC 296-839-500 (Continued)

Container

A vessel, other than a pipe or piping system, that holds a hazardous chemical. Examples include:

- Bags
- Barrels
- Bottles
- Boxes
- Cans
- Cylinders
- Drums
- Reaction vessels
- Storage tanks
- Rail cars.

Designated representative

- An individual or organization with written authorization from an employee
OR
- A recognized or certified collective bargaining agent (not necessarily authorized by an employee)
OR
- A legal representative of a deceased or legally incapacitated employee.

Distributor

A business that supplies hazardous chemicals to other employers. Included are employers who conduct retail and wholesale transactions.

Explosive

A chemical that causes a sudden, almost instant release of pressure, gas, and heat when exposed to a sudden shock, pressure, or high temperature.

-Continued-

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Material Safety Data Sheet and Label Preparation

WAC 296-839-500

Definitions

WAC 296-839-500 (Continued)

Flammable

A chemical in one of the following categories:

- Aerosols that, when tested using a method described in 16 CFR 1500.45, yield either a:
 - Flame projection of more than 18 inches at full valve opening**OR**
 - A flashback (a flame extending back to the valve) at any degree of valve opening
- Gases that, at the temperature and pressure of the surrounding area, form a:
 - Flammable mixture with air at a concentration of 13% by volume, or less**OR**
 - Range of flammable mixtures with air wider than 12%, by volume, regardless of the lower limit
- Liquids with a flashpoint below 100°F (37.8°C). A mixture with at least 99% of its components having flashpoints of 100°F (37.8°C), or higher, isn't considered a flammable liquid
- Solids, other than blasting agents or explosives, as defined in WAC 296-52-417 or 29 CFR 1910.109(a), that:
 - Is likely to cause fire through friction, moisture, absorption, spontaneous chemical change or retained heat from manufacturing or processing**OR**
 - That can be readily ignited (and when ignited burns so vigorously and persistently that it creates a serious hazard)**OR**
 - When tested by the method described in 16 CFR 1500.44, ignite and burn with a self-sustained flame at a rate greater than 1/10th of an inch per second along its major axis.

-Continued-

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Material Safety Data Sheet and Label Preparation

WAC 296-839-500

Definitions

WAC 296-839-500 (Continued)

Flashpoint

The minimum temperature at which a liquid gives off an ignitable concentration of vapor, when tested by any of the following measurement methods:

- Tagliabue closed tester. Use this for liquids with a viscosity less than, 45 Saybolt Universal Seconds (SUS) at 100°F (37.8°C), that don't contain suspended solids and don't tend to form a surface film under test. See American National Standard Method of Test for Flashpoint by Tag Closed Tester, Z11.24-1979 (ASTM D 56-79)
- Pensky-Martens closed tester. Use this for liquids with a viscosity equal to, or greater than, 45 SUS at 100°F (37.8°C) or for liquids that contain suspended solids or have a tendency to form a surface film under test. See American National Standard Method of Test for Flashpoint by Pensky-Martens Closed Tester, Z11.7-1979 (ASTM D 93-79)
- Setaflash closed tester. See American National Standard Method of Test for Flashpoint by Setaflash Closed Tester (ASTM D 3278-78)

Organic peroxides, which undergo auto accelerating thermal decomposition, are excluded from any of the flashpoint measurement methods specified above.

Hazardous chemical

A chemical, which is a physical or health hazard.

Hazard warning

Words, pictures or symbols (alone or in combination) that appear on labels (or other forms of warning such as placards or tags) that communicate specific physical and health hazards (including target organ effects) associated with chemicals in a container.

-Continued-

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Material Safety Data Sheet and Label Preparation

WAC 296-839-500

Definitions

WAC 296-839-500 (Continued)

Health hazard

A chemical that may cause health effects in short or long-term exposed employees based on statistically significant evidence from a single study conducted by using established scientific principles.

Health hazards include, but aren't limited to, any of the following:

- Carcinogens
- Toxic or highly toxic substances
- Reproductive toxins
- Irritants
- Corrosives
- Sensitizers
- Hepatotoxins (liver toxins)
- Nephrotoxins (kidney toxins)
- Neurotoxins (nervous system toxins)
- Substances that act on the hematopoietic system (blood or blood forming system)
- Substances that can damage the lungs, skin, eyes, or mucous membranes.

Identity

A chemical or common name listed on the Material Safety Data Sheet (MSDS) and label.

Importer

The first business, within the Customs Territory of the United States, that receives hazardous chemicals produced in other countries and supplies them to manufacturers, distributors or employers within the United States.

Label

Written, printed, or graphic material displayed on, or attached to, a container of hazardous chemicals.

-Continued-

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Material Safety Data Sheet and Label Preparation

WAC 296-839-500

Definitions

WAC 296-839-500 (Continued)

Manufacturer

An employer with a workplace where one or more chemicals (including items not exempt as "articles," see Table 1 in this chapter) are produced for use or distribution.

Material safety data sheet (MSDS)

Written, printed or electronic information (on paper, microfiche, or on-screen) that informs manufacturers, distributors or employers about the chemical, its hazards and protective measures as required by this rule.

Mixture

A combination of 2 or more chemicals that retain their chemical identify after being combined.

Organic peroxide

An organic compound containing the bivalent-O-O- structure. It may be considered a structural derivative of hydrogen peroxide if one or both of the hydrogen atoms has been replaced by an organic radical.

Oxidizer

A chemical, other than a blasting agent or explosive as defined in WAC 296-52-417 or 29 CFR 1910.109(a), that starts or promotes combustion in other materials, causing fire either of itself or through the release of oxygen or other gases.

Permissible exposure limits

See chapter 296-841 WAC, for definition of this term.

-Continued-



Material Safety Data Sheet and Label Preparation

WAC 296-839-500

Definitions

WAC 296-839-500 (Continued)

Physical hazards

A chemical that has scientifically valid evidence to show it's one of the following:

- A combustible liquid
- A compressed gas
- Explosive
- Flammable
- An organic peroxide
- An oxidizer
- Pyrophoric
- Unstable (reactive)
- Water-reactive

Produce

To do one or more of the following:

- Manufacture
- Process
- Formulate
- Blend
- Extract
- Generate
- Emit
- Repackage

Pyrophoric

Chemicals that ignite spontaneously in the air at a temperature of 130°F (54.4°C) or below.

-Continued-

1 • 800 • 4 B E S A F E (1 • 800 • 4 2 3 • 7 2 3 3)



Material Safety Data Sheet and Label Preparation

WAC 296-839-500

Definitions

WAC 296-839-500 (Continued)

Responsible party

Someone who can provide more information about the hazardous chemical and appropriate emergency procedures.

Threshold limit values (TLVs)

Airborne concentrations of substances established by the American Conference of Governmental Industrial Hygienists (ACGIH), and represent conditions under which it is believed that nearly all workers may be repeatedly exposed day after day without adverse health effects.

TLVs are specified in the most recent edition of the Threshold limit values for Chemical Substances and Physical Agents and Biological Exposure Indices and include the following categories:

- Threshold limit value-time-weighted average (TLV-TWA)
- Threshold limit value-short-term exposure limit (TLV-STEL)
- Threshold limit value-ceiling (TLV-C).

Unstable (reactive)

A chemical in its pure state, or as produced or transported, that will vigorously polymerize, decompose, condense, or become self-reactive under conditions of shocks, pressure or temperature.



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<http://www.lni.wa.gov/>

Material Safety Data Sheet and Label Preparation

WAC 296-839-500

Definitions

WAC 296-839-500 (Continued)

Use

To do one or more of the following:

- Package
- Handle
- React
- Emit
- Extract
- Generate as a by-product
- Transfer

Water-reactive

A chemical that reacts with water to release a gas that is either flammable or presents a health hazard.

